

1 **CLAIMS**

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3 We claim:

1 1. A method comprising:
2 generating a first key component;
3 generating an encryption key using the first key component, a token
4 key and a personal identification number (PIN);
5 encrypting data using the encryption key;
6 sending the data encrypted with the encryption key to a server along
7 with the first key component.

1 2. The method defined in Claim 1 further comprising receiving
2 the token key from a service provider.

1 3. The method defined in Claim 1 further comprising the server
2 storing the first key component and the data encrypted with the encryption
3 key.

1 4. The method defined in Claim 1 wherein the token key is
2 unique for each user.

1 5. The method defined in Claim 1 wherein the first key
2 component is unique for each data entry stored by the server.

1 6. A method comprising:
2 encrypting data using the encryption key generating using a first key
3 component, a token key and a personal identification number (PIN);
4 storing data encrypted using the encryption key; and
5 regenerating the encryption key after accessing the encrypted data to
6 decrypt the encrypted data therewith.

1 7. The method defined in Claim 6 further comprising disabling
2 the token.

1 8. The method defined in Claim 7 wherein the token is disabled if
2 lost.

1 9. The method defined in Claim 7 wherein the token is disabled if
2 compromised.

1 10. The method defined in Claim 7 further comprising re-enabling
2 the token.

1 11. The method defined in Claim 6 wherein the token ID
2 comprises an alpha-numeric string.

1 12. The method defined in Claim 11 wherein the token key
2 comprises a randomly generated number.

1 13. The method defined in Claim 11 wherein either or both of the
2 token key and PIN comprises biometric data.

1 14. The method defined in Claim 11 wherein the token key is the
2 same for all tokens used by the user.

1 15. The method defined in Claim 6 further comprising:

2 monitoring browsing activities;
3 identifying web pages containing a form; and
4 inserting content into the form.

1 16. The method defined in Claim 15 wherein inserting content into
2 the form is performed automatically.

1 17. The method defined in Claim 15 wherein inserting content into
2 the form is performed with user confirmation.

1 18. The method defined in Claim 15 further comprising allowing a
2 user to select the form to fill in.

1 19. The method defined in Claim 15 further comprising allowing a
2 user to select a variant of the form to fill in.

1 20. A method comprising:
2 retrieving a key component and encrypted data from a server;

3 recreating an encryption key using the key component, a token key
4 and a personal identification number (PIN); and
5 performing a decryption operation on the encrypted data using a
6 decryption key based on the encryption key used to encrypt the encrypted
7 data.

1 21. A method for authentication comprising:
2 generating authentication data for a user based on a token key and a
3 personal identification number (PIN), the token key being unique to the
4 user; and
5 receiving a confirmation indicating that the authentication data has
6 been verified.

1 22. A method comprising:
2 accessing encrypted data from a server;
3 decrypting the encrypted data using a token and a user-specific PIN
4 to be accessed.

1 23. The method defined in Claim 22 wherein the token comprises
2 a token identifier (ID) and a token key.

1 24. The method defined in Claim 22 wherein the token comprises
2 a utility to manage data depending on data type.

1 25. The method defined in Claim 24 wherein the utility operates
2 on data in response to explicit user command or by automatically
3 monitoring applications producing and/or consuming data of that type.

1 26. The method defined in Claim 25 wherein the utility handles
2 password data.